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10/784,492	02/23/2004	Kyle Marvin	BEAS-01445US1 SRM/DTX	2152

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FLIESLER MEYER LLP
650 CALIFORNIA STREET
14TH FLOOR
SAN FRANCISCO, CA 94108

EXAMINER
KISS, ERIC B

ART UNIT	PAPER NUMBER
2192	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/29/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>23 February 2004</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-44</u> is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-44</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>23 February 2004</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date <u>See Continuation Sheet</u>.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____ .

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :20050224, 20050407, 20050705, 20060215, 20060217, 20060519, 20061218.

DETAILED ACTION

1.   Claims 1-44 have been examined.

Information Disclosure Statement

2.   The Information Disclosure Statement (IDS) filed February 17, 2006, is a duplicate of the

IDS filed February 15, 2006.

3.   The IDS filed July 5, 2005, does not contain the document number for the cited reference.

Accordingly, the cited document has not been considered.

Drawings

4.   Figure 1 should be designated by a legend such as --Prior Art-- because only that which is

old is illustrated. See MPEP § 608.02(g).

5.   The drawings (in particular, Figures 3A, 3B, 3C, and 11-15) are objected to because they

fail to comply with 37 CFR 1.84 (l), (m), and (p)(3).

6.   Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to

the Office action to avoid abandonment of the application. Any amended replacement drawing

sheet should include all of the figures appearing on the immediate prior version of the sheet,

even if only one figure is being amended. The figure or figure number of an amended drawing

should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure

must be removed from the replacement sheet, and where necessary, the remaining figures must

be renumbered and appropriate changes made to the brief description of the several views of the

drawings for consistency. Additional replacement sheets may be necessary to show the

renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet"

pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will

be notified and informed of any required corrective action in the next Office action. The

objection to the drawings will not be held in abeyance.

Specification

7.   Applicant is reminded of the proper content, language, and format for an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:
(1) if a machine or apparatus, its organization and operation;
(2) if an article, its method of making;
(3) if a chemical compound, its identity and use;
(4) if a mixture, its ingredients;
(5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

8.   The abstract of the disclosure is objected to because of the use of legal phraseology,

references to the purported merits and speculative applications of the invention, and comparisons

with the prior art. Correction is required. See MPEP § 608.01(b). The examiner suggests

deleting the last four sentences of the abstract.

Claim Rejections - 35 USC § 101

9.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or
> any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and
> requirements of this title.

10.   Claims 1-44 are rejected under 35 U.S.C. 101 because the claimed invention is directed

to non-statutory subject matter.

Descriptive material can be characterized as either "functional descriptive material" or

"nonfunctional descriptive material." In this context, "functional descriptive material" consists

of data structures and computer programs which impart functionality when employed as a

computer component. (The definition of "data structure" is "a physical or logical relationship

among data elements, designed to support specific data manipulation functions." The New IEEE

Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional

descriptive material" includes but is not limited to music, literary works and a compilation or

mere arrangement of data. Both types of "descriptive material" are nonstatutory when claimed

as descriptive material *per se. In re Warmerdam*, 33 F.3d 1354, 1361, 31 USPQ2d 1754, 1760

(claim to a data structure per se held nonstatutory).

Data structures not claimed as embodied in computer-readable media are descriptive

material *per se* and are not statutory because they are not capable of causing functional change in

the computer. *See, e.g., In re Warmerdam*, 33 F.3d 1354, 1361, 31 USPQ2d 1754, 1760 (claim to

a data structure per se held nonstatutory). Such claimed data structures do not define any

structural and functional interrelationships between the data structure and other claimed aspects

of the invention which permit the data structure's functionality to be realized. In contrast, a

claimed computer-readable medium encoded with a data structure defines structural and

functional interrelationships between the data structure and the computer software and hardware

components which permit the data structure's functionality to be realized, and is thus statutory.

Similarly, computer programs claimed as computer listings per se, *i.e.*, the descriptions or

expressions of the programs, are not physical "things." They are neither computer components

nor statutory processes, as they are not "acts" being performed. Such claimed computer

programs do not define any structural and functional interrelationships between the computer

program and other claimed elements of a computer which permit the computer program's

functionality to be realized. In contrast, a claimed computer-readable medium encoded with a

computer program is a computer element which defines structural and functional

interrelationships between the computer program and the rest of the computer which permit the

computer program's functionality to be realized, and is thus statutory. *See In re Lowry*, 32 F.3d

1579, 1583-84, 32 USPQ2d 1031, 1035.

Claim 1-18 and 43 recite a "system" comprising a series of elements that can be

reasonably interpreted as software, *per se*. The claim does not define any structural and

functional interrelationships between the software elements and a computer that would permit

the described functionality to be realized when the software is employed as a computer

component. Accordingly, claims 1-18 and 43 appear to merely set forth non-functional descriptive material *per se*, which is nonstatutory.

A claim that requires one or more acts to be performed defines a process. However, not all processes are statutory under 35 U.S.C. § 101. To be statutory, a claimed process must either: (A) result in a physical transformation for which a practical application is either disclosed in the specification or would have been known to a skilled artisan, or (B) be limited to a practical application which produces a useful, tangible, and concrete result. *See Diamond v. Diehr*, 450 U.S. 175, 183-84, 209 USPQ 1, 9 (1981) (quoting *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1876)) ("A [statutory] process is a mode of treatment of certain materials to produce a given result. It is an act, or a series of acts, performed upon the subject-matter to be transformed and reduced to a different state or thing . . . . The process requires that certain things should be done with certain substances, and in a certain order; but the tools to be used in doing this may be of secondary consequence."). *See also In re Alappat*, 33 F.3d 1526, 1543, 31 USPQ2d 1545, 1556-57 (quoting *Diehr*, 450 U.S. at 192, [209 USPQ at 10]).

In *State Street*, the Federal Circuit examined some of its prior section 101 cases, observing that the claimed inventions in those cases were each for a "practical application of an abstract idea" because the elements of the invention operated to produce a "useful, concrete and tangible result." *State St. Bank & Trust v. Signature Fin. Group*, 149 F.3d 1368, 1373-74, 47 USPQ2d 1596, 1601-02 (Fed Cir. 1998). For example, the court in *State Street* noted that the claimed invention in *Alappat* "constituted a practical application of an abstract idea (a mathematical algorithm, formula, or calculation), because it produced 'a useful, concrete and

tangible result'—the smooth waveform." *Id.* Similarly, the claimed invention in *Arrhythmia* "constituted a practical application of an abstract idea (a mathematical algorithm, formula, or calculation), because it corresponded to a useful, concrete and tangible thing—the condition of a patient's heart." *Id.* (citing *Arrhythmia Research Tech. V. Corazonix Corp.*, 958 F.2d 1053, 22 USPQ2d 1033 (Fed. Cir. 1992)).

In determining whether the claim is for a "practical application," the focus is not on whether the steps taken to achieve a particular result are useful, tangible and concrete, but rather that the final <u>result</u> is "useful, tangible and concrete." The Federal Circuit further ruled that it is of little relevance whether a claim is directed to a machine or process for the purpose of a § 101 analysis. *AT&T Corp. v. Excel Commc'ns*, 172 F.3d 1352, 1358, 50 USPQ2d 1447, 1451 (Fed. Cir. 1999).

Claims 1-18 set forth systems comprising elements merely described as being "capable of" carrying out functions. Since the claim language appears to make all of the functional steps optional, claims 1-18 do not necessarily produce any useful, tangible, and concrete result necessary to achieve a practical application. Accordingly, claims 1-28 are nonstatutory.

Claims 19-43 are directed to methods (claims 19-30), a system (claim 43), and machine-readable media (claims 31-42) for "exposing" program logic, providing a "service", and generating a "mechanism" (specified in optional language, *i.e.*, "can include . . ."). This claimed subject matter lacks a practical application of a judicial exception (law of nature, abstract idea, naturally occurring article/ phenomenon) since it fails to produce a useful, concrete and tangible result. Specifically, the claimed subject matter does not produce a <u>tangible</u> result because the claimed subject matter fails to produce a result that is limited to having real world value rather

than a result that may be interpreted to be abstract in nature as, for example, a thought, a

computation, or manipulated data. More specifically, the claimed subject matter describes at

best the performing of a process that is not tied to any particular tangible output capable of being,

for example, stored, displayed, or conveyed in any manner causing any useful functional or

structural change in a computer system so as to achieve a practical application. This produced

result remains in the abstract and, thus, fails to achieve the required status of having real world

value.

Claim 44 sets for a signal encoded with functional descriptive material. The Office's

current position is that claims involving signals encoded with functional descriptive material do

not fall within any of the categories of patentable subject matter set forth in 35 U.S.C. § 101, and

such claims are therefore ineligible for patent protection. *See* 1300 OG 142 (November 22,

2005) (in particular, see Annex IV(c)).

11.   To expedite a complete examination of the instant application, the claims rejected under

35 U.S.C. §101 (non-statutory) above are further rejected as set forth below in anticipation of

Applicant amending these claims to place them within the four statutory categories of invention.

Claim Rejections - 35 USC § 112

12.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

13.   Claims 6 and 11-13 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

Claims 6 and 11-13 contain the trademarks/trade names JAVA, ENTERPRISE

JAVABEANS, and EJB. Where a trademark or trade name is used in a claim as a limitation to

identify or describe a particular material or product, the claim does not comply with the

requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd.

App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used

properly to identify any particular material or product. A trademark or trade name is used to

identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does

not identify or describe the goods associated with the trademark or trade name. In the present

case, the trademark/trade name is used to identify/describe particular programming languages

and component architectures and, accordingly, the identification/description is indefinite.

Claim Rejections - 35 USC § 102

14.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

15.   Claims 1-13, 16, 19-27, 29, 31-39, 41, 43, and 44 are rejected under 35 U.S.C. 102 (a)

and (e) as being anticipated by US 2003/0005181 A1 (BAU, III, et al.).

As per claim 1, *BAU, III, et al.* discloses a system to provide a network-accessible

service, comprising: an annotated source code, which is a programming language augmented

with declarative meta-data capable of exposing program logic as a network-accessible service

(see, for example, paragraph [0026] on p. 2);

at least one deployed service component capable of providing the network-accessible

service to a client (see, for example, paragraph [0026] on p. 2); and

an enhanced compiler capable of analyzing the annotated source code, recognizing

numerous types of meta-data annotations, and generating a mechanism, which can include one or

more of: object files, software components and deployment descriptors, to facilitate the

deployment of the at least one service component (see, for example, paragraph [0026] on p. 2).

As per claim 2, *BAU, III, et al.* further discloses the network-accessible service is a Web

service (see, for example, paragraph [0026] on p. 2).

As per claim 3, *BAU, III, et al.* further discloses the system is capable of simultaneously

managing multiple transactions, wherein each transaction can be a conversation of a request

and/or a response from the client for the network-accessible service (see, for example,

paragraphs [0045] through [0056] on pp. 4-5).

As per claim 4, *BAU, III, et al.* further discloses the system is capable of managing

multiple asynchronous transactions, wherein within each asynchronous transaction, the response

may be temporally separated from the initiating request for the network-accessible service from

the client (see, for example, paragraphs [0045] through [0056] on pp. 4-5).

As per claim 5, *BAU, III, et al.* further discloses an integrated development environment

(IDE) capable of facilitating a graphical interface-based design and deployment of the network-

accessible service (see, for example, paragraph [0026] on p. 2).

As per claim 6, *BAU, III, et al.* further discloses the annotated source code is Java-based (see, for example, paragraph [0079] on p. 6).

As per claim 7, *BAU, III, et al.* further discloses the meta-data can be either in-file with the annotated source code, or in a separate file, which can be a specially formatted XML file (see, for example, paragraph [0043] on p. 4).

As per claim 8, *BAU, III, et al.* further discloses the annotated source code is capable of facilitating access to an external service, which can be one of stateful, stateless, synchronous, and asynchronous (see, for example, paragraphs [0068] and [0069] on p. 5).

As per claim 9, *BAU, III, et al.* further discloses the annotated source code is capable of defining a wire binding between the network-accessible service and a physical wire format and/or protocol (see, for example, paragraphs [0058] and [0059] on p. 5).

As per claim 10, *BAU, III, et al.* further discloses the wire binding can be at least one of: SOAP over HTTP or SMTP; transport of XML via generic HTTP Post; transport of XML over other protocols such as FTP and mail; and transport of XML over messaging services such as JMS or MSMQ (see, for example, paragraphs [0058] and [0059] on p. 5).

As per claim 11, *BAU, III, et al.* further discloses the at least one service component comprises a servlet container and an Enterprise Java Bean (EJB) container, which are coupled together to deploy a Web service (see, for example, paragraphs [0085] and [0086] on p. 7).

As per claim 12, *BAU, III, et al.* further discloses the servlet container is capable of at least one of: listening and responding to a service request from the client; and identifying and queuing the service request to be buffered (see, for example, paragraphs [0085] and [0086] on p. 7).

As per claim 13, *BAU, III, et al.* further discloses the EJB container is capable of dispatching a service request based on meta-data to a stateless or stateful component (see, for example, paragraphs [0085] and [0086] on p. 7).

As per claim 16, *BAU, III, et al.* further discloses the enhanced compiler is capable of creating reliable messaging software for the network-accessible service using a specification provided by the annotated source code, wherein the reliable message software is capable of guaranteeing message delivery for communication between the service and the client (see, for example, paragraphs [0007] and [0008] on p. 1).

Regarding claims 19-27 and 29, these are method versions of the claimed system discussed above (claims 1-5, 8, 9, 12, 13, and 16), wherein all limitations have been addressed as set forth above.

Regarding claims 31-39 and 41, these are machine-readable medium versions of the claimed system discussed above (claims 1-5, 8, 9, 12, 13, and 16). *BAU, III, et al.* further discloses the use of such media (see, for example, paragraph [0096] on p. 8), and all other limitations have been addressed as set forth above.

Regarding claim 43, see the discussion above for claim 1.

Regarding claim 44, this is a transmission medium version of the claimed system discussed above (claim 1). *BAU, III, et al.* further discloses the use of such media (see, for example, paragraph [0096] on p. 8), and all other limitations have been addressed as set forth above.

Claim Rejections - 35 USC § 103

16.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

17.   Claims 14, 15, 17, 18, 28, 30, 40, and 42 are rejected under 35 U.S.C. 103(a) as being

unpatentable over US 2003/0005181 A1 (BAU, III, et al.) in view of US 2002/0174241 A1

(BEGED-DOV et al.).

Regarding claims 14 and 15, in addition to the disclosure applied above, *BAU, III, et al.*

fails to expressly disclose implementing such a security type. However, *BEGED-DOV et al.*

teaches such security types (for example, user identity...) in the context of web services (see, for

example, paragraph [0019] on p. 3). Therefore, it would have been obvious to one of ordinary

skill in the art at the time the invention was made to incorporate such a security type as per the

teachings of *BEGED-DOV et al.* One would be motivated to do so to mitigate risk by providing

a known security mechanism (see, for example, *BEGED-DOV et al.*, paragraph [0019] on p. 3).

Regarding claims 17 and 18, in addition to the disclosure applied above, *BAU, III, et al.*

fails to expressly disclose implementing such an interceptor. However, *BEGED-DOV et al.*

teaches such an interceptor (for example, interception and transformation...) in the context of

web services (see, for example, paragraphs [0018] through [0020] on pp. 2-3). Therefore, it

would have been obvious to one of ordinary skill in the art at the time the invention was made to

incorporate such an interceptor as per the teachings of *BEGED-DOV et al.* One would be

motivated to do so to efficiently implement a secure transfer of resources (see, for example, paragraphs [0018] through [0020] on pp. 2-3).

Regarding claims 28 and 30, these are method versions of the claimed system discussed above (claims 14 and 17), wherein all limitations have been addressed as set forth above. Therefore, for reasons stated above, such claims also would have been obvious.

Regarding claims 40 and 42, these are machine-readable medium versions of the claimed system discussed above (claims 14 and 17). *BAU, III, et al.* further discloses the use of such media (see, for example, paragraph [0096] on p. 8), and all other limitations have been addressed as set forth above. There, for reasons stated above, such claims also would have been obvious.

Conclusion

18.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

19.   Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Eric B. Kiss whose telephone number is (571) 272-3699. The Examiner can normally be reached on Tue. - Fri., 7:00 am - 4:30 pm. The Examiner can also be reached on alternate Mondays.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Tuan Dam, can be reached on (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature should be directed to the TC 2100 Group receptionist:

571-272-2100.

Eric B. Kiss
March 23, 2007